



A new ERA for global Dermatology 10 - 15 JUNE 2019 MILAN, ITALY

PIGMENTATION

## PROTECTION AGAINST SUMMER SOLAR LENTIGINES OVER-PIGMENTATION

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Introduction: Solar lentigines, which are macular hyper-pigmented lesions induced by chronic sun exposure and progressing with age, are usually considered unsightly.

Objective: The aim of the present study is to measure lentigines' pigmentation over a long period of time and evaluate if summer over-pigmentation can be avoided by the use an SPF30 day skin cream.

Materials and Methods: Seventeen healthy female volunteers aged 50 and over and presenting lentigines on the hand participated in the study from spring to summer. Throughout the study, all subjects applied an SPF30 daily skin cream to only one hand. Color measurements of the target lesions were performed with a color-calibrated camera and with a chromameter. Target lesions were also imaged with in-vivo reflectance confocal microscopy (RCM). In order to precisely quantify the lentigines' pigmentation at the basal layer, a new approach was proposed which can measure the papillary contrast on exactly the same skin zone each time.

Results: Both color measurement methods, chromametry and color-calibrated camera, showed that lentigines treated over time with the SPF30 day skin cream were significantly lighter than the non-treated ones : (&#916;L\*=2.9±1.2, p=0.0006 a color-calibrated camera). The RCM images showed a decrease of the papillary contrast for the treated lentigines (&#916;C=-3.8±3.1, p=0.075).

Conclusion: The present study shows that this over-pigmentation can be avoided by using an SPF30 day skin cream. The color analysis, which translates the visual aspect of the lentigine, was complemented by a confocal analysis to measure changes of pigmentation at the basal layer. We have demonstrated that very fine repositioning of the RCM is possible and ensures a more robust analysis.





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